

## WHAT IS CLAIMED IS:

1. A composition comprising annatto extract with tocotrienol.
2. The composition of claim 1, further comprising a natural extract.
3. The composition of claim 2, where the composition has standardized low levels of tocopherols
4. The composition of claim 2, where the natural extract is selected from the group consisting of soy, corn, rice bran, palm, olive, wheat germ, oat bran, sunflower seed, cottonseed, cranberry seed, and litchi seed.
5. The composition of claim 3, where the tocopherol is alpha-T1.
6. The composition of claim 2, where the annatto extract and the natural extract produce an appropriate spectrum.
7. The composition of claim 6, where more than 50% of the tocotrienols are delta-T3 and gamma-T3.
8. The composition of claim 6, where more than 50% of the tocotrienols are delta-T3.
9. The composition of claim 6, where the composition is tocopherol-free.
10. The composition of claim 1, where the tocotrienol is a C5 unsubstituted tocotrienol and the composition comprises more than 60% C5 unsubstituted tocotrienols, and less than 15% tocopherols.
11. The composition of claim 1, where the tocotrienol activates PPARs.

12. The composition of claim 11, where the tocotrienol further down regulates SREBP transcription factors.
13. The composition of claim 1, where the tocotrienol decreases blood levels of triglyceride.
14. The composition of claim 13, where the decrease in the blood level of the triglyceride has an effect selected from the group consisting of reversal of insulin resistance, metabolic syndrome, prediabetes, diabetes and diabetes-related cardiovascular disease.
15. The composition of claim 1, where a tocotrienol treats a malady effecting the central nervous system.
16. The composition of claim 15, where a tocotrienol treats a malady effecting the central nervous system, and the malady is selected from the group consisting of acute nerve damage, neural degenerative genetic disease, acute brain damage, brain trauma, chronic nerve damage, neural toxicity, chronic brain damage, Alzheimer's, Parkinson's, and Huntington's.
17. The composition of claim 1, where the tocotrienol has a beneficial effect selected from the group consisting of lowers CRP, protects against inflammation, lowers cholesterol, decreases cardiovascular risk index, decreases metabolic risk index, decreases chemotactic bioactive materials, reduces osteoporosis, increases bone mineralization, enhances immune system, lowers lipids, and reverses insulin resistance
18. A method comprising administering annatto extract and producing a beneficial effect selected from the group consisting of lowers CRP, protects against inflammation, lowers cholesterol, decreases cardiovascular risk index, decreases metabolic risk index, decreases chemotactic bioactive materials, improves arterial vasculature, reduces osteoporosis, increases bone mineralization, enhance immune system, lowers lipids, reverses insulin resistance, increases natriuresis, and extends life.
19. A method to reduce skin maladies, comprising topical application of annatto extract.

20. A method to reverse insulin resistance, comprising administering annatto extract containing tocotrienol and potentiating insulin.

21. The method of claim 20, further comprising lowering the risk of a disease selected from the group consisting of CVD, T2DM, hypertension, PCOS and fatty liver disease.

22. A method to reduce cancer, comprising administering annatto extract containing tocotrienol and geranyl geraniol.

23. A method to reduce cardio vascular diseases and diabetes comprising annatto extract tocotrienol and producing a beneficial effect selected from the group consisting of phytosterols, oryzanols, policosanols, pentathine, red yeast rice (*Monascus*), oat bran, garlic, gugul lipids, chitosan, soy protein (e.g., oligo- and poly-peptides, hydrolysates), CoQ10, carnitine, magnesium, calcium, D-tyroxine, fibers (insoluble and soluble types, including beta-glucans), omega-3s (DHAs and EPAs, alpha linoleic acid), and lecithin.

24. A method to treat prediabetes and diabetes simultaneously (glucose-fatty acid cycle) comprising annatto extract tocotrienol and producing a beneficial effect selected from the group consisting of banaba extract (including corosolic acid), lipoic acids (all isomeric forms), chromium (all compounded forms), and B vitamins (including niacin).